Quarterly Report
Q4 June FY24

3 months to 30 June 2024 (unaudited)

St Barbara ("SBM" or the "Company") (ASX:SBM) provides the following Q4 June FY24 quarterly report.

Highlights

Project Development

- Simberi Ore Reserves increased by 0.8 Moz to 2.8 Moz (40% increase) after successful conversion of 1.9 Moz of Mineral Resources from Inferred to Measured and Indicated (Total Simberi Mineral Resources up 5% to 5.0Moz)[1]
- Commenced FY25 diamond drilling program of 9,000 metres targeting new Sorowar – Pigiput trend discovery, the extension of Samat deposit and exploration / sterilisation at Pigibo North
- Simberi Expansion Concept Study completed with 10 Year Plus Mine Plan:
    - Average annual gold production from FY28 through to FY34 rising to over 200,000 ounces per annum at All-in Sustaining Cost (AISC) in the range of US$1,000 to US$1,200/oz
    - Metallurgical testwork to confirm flowsheet alternatives rapidly advancing towards final flowsheet selection

Operating Performance

- Simberi operating strategy continues to be achievement of prolonged oxide life at close to or better than break-even operating cashflow as a superior outcome to costly temporary closure with care and maintenance
- Q4 gold production at Simberi of 14,100 ounces of gold at an AISC of A$3,590 per ounce
- FY24 production from Simberi of 54,705 ounces of gold (middle of revised guidance of 52,000 to 56,000 ounces) at AISC of A$3,694/oz (bottom end of revised guidance of A$3,700 to A$3,900/oz) inclusive of A$8 million of sustaining capital (below guidance of A$13 to A$15 million)
- FY24 growth capital investment at Simberi of A$14 million (above guidance of A$10 to A$13 million)

FY25 Guidance

- Gold production guidance at Simberi of between 65,000 and 75,000 ounces at an AISC of between A$3,200 and A$3,600 per ounce[2], inclusive of sustaining capital of between A$10 and A$15 million
- Growth capital investment at Simberi of A$30 to A$40 million in line with 10 Year Plus Mine Plan
- Group exploration expenditure of between A$10 and A$13 million, including A$8 to A$10 million at Simberi

Financial Strength

- Cash of A$191 million at 30 June 2024[3], after costs in Q4 for growth capital of A$11 million, Simberi's operating loss of A$7 million and Atlantic care and maintenance of A$3 million
- Listed investments increased in value to A$49 million (up from A$27 million at end of Q3)
- Gold sales for quarter of 15,565 ounces (including 746oz from process plant clean-up materials from Touquoy) at average realised price of A$3,525 per ounce

1 Refer to ASX announcement on 30 July 2024 titled *'Simberi Ore Reserves Increase 40% to 2.8 Moz; Mineral Resource and Ore Reserve Statement as at 30 June 2024'*

2 US$2,100 to US$2,400 per ounce at AUD/USD of 0.66

3 Including A$45 million of restricted cash (held in Canada) for the Touquoy rehabilitation bond

Managing Director and CEO Andrew Strelein said *"Q4 has been an incredibly important quarter for the advancement of our plans for the Simberi 10 Year Plus Mine Plan, increasing our Ore Reserves by 40% to 2.8 Moz and the delivery of the Concept Study outcomes announced in May."*

"Pleasingly, Simberi ore tonnes mined and processed for Q4 were both at record highs for the year despite the interruptions to logistics due to currency and aviation fuel shortages in PNG. With the arrival of the two trial Volvo A60Hs at quarter end, the placement of orders for excavators as well as for new sizer installation, we have confidence in continuing the improvement in mining and milling performance over FY25 to underpin a lift in gold production to a guidance range of 65 to 75 koz from 55 koz this year."

"St Barbara is in a strong position, with substantial Mineral Resources and Ore Reserves, a strong balance sheet and a clear development pathway for Simberi."

Development Projects

St Barbara has development projects located on Simberi Island, Papua New Guinea and in Nova Scotia, Canada.

Simberi

St Barbara's 10 Year Plus Mine Plan for Simberi includes the mining of multiple open pits to exploit the substantial oxide and sulphide Ore Reserves.

Simberi Expansion Concept Study

The results of the Concept Study were released on schedule in May[4] and outlined a 10 Year Plus Mine Plan with highlights including:

- Average annual gold production rising to over 200,000 ounces per annum from FY28 through to FY34
- All-in Sustaining Cost (AISC) decreasing to the range of US$1,000 to US$1,200/oz from FY28 to FY34
- Expansion Growth Capital estimated at US$213 million (-20/+30% Class 5 Estimate) across FY26 to FY28
    - Additions to existing circuit: new ball mill, flotation circuit, concentrate shed and wharf upgrade
- Pre-Expansion Growth Capital of between US$40 million to US$55 million across FY25 to FY27
    - Studies and designs, new sizer, camp upgrade, RO Plant and miscellaneous improvements

The next major step to progress the Simberi Expansion study work is the completion of the metallurgical testwork program, which is on track for early Q3 FY25. In Q2 the testwork results will allow a decision on the merits of the concentrate Ultra Fine Grind (UFG) / cyanide leach flowsheet option (to produce gold doré) compared to the current flowsheet option of producing a saleable gold concentrate.

The Company is on track for commencing early Feasibility Study work in September 2024, ahead of final flowsheet selection, including review of the processing layout and completion of the metallurgical testwork program. This work allows a head-start on the Feasibility Study update anticipated to be completed in Q4 FY25.

4 Refer to ASX announcement on 10 May 2024 titled *"St Barbara's 10 Year Plus Outlook for Simberi"*

Resource Definition Drilling

St Barbara separately announced today its update of the Simberi Mineral Resource and Ore Reserve position as at 30 June 2024 confirming the following totals:

- Ore Reserves estimated at 47.3 Mt @ 1.8 g/t Au for 2.8 Moz of contained gold; and
- Mineral Resources estimated at 113.6 Mt @ 1.4 g/t Au for 5.0 Moz of contained gold.

Proved and Probable Ore Reserves were increased by 40% from 2.0 Moz as at 31 December 2023 to 2.8 Moz at 30 June 2024. A total of 1.9 Moz of Mineral Resources were upgraded from Inferred to Measured and Indicated class through the completion of the FY24 Resource development drilling campaign and additional modelling work (versus revised target of 1.5 Moz).

The FY24 resource definition and exploration drilling program comprising 31 holes for 7,490.9 m, was completed in late June. The program focused on infill and extension drilling of the sulphide resource at Pigiput, Sorowar and Pigibo. 23 resource definition drill holes were completed for 4,587.6 m, including fifteen Sorowar – Pigiput Trend holes and eight Pigibo holes. In addition, eight exploration drill holes were completed for 2,903.3 m, including four Sorowar – Pigiput Trend holes and four Pigibo holes.

Assay results for the first seven Sorowar – Pigiput Trend holes were received during the March Quarter. Assay results for the remaining eight resource definition drill holes at Sorowar – Pigiput trend, eight resource definition drill holes at Pigibo and four exploration drill holes at Sorowar – Pigiput trend were received during the June quarter. Assay results for the final four Pigibo exploration drill holes are expected to be received in September 2024.

The assay results for the fifteen Sorowar – Pigiput resource definition diamond holes were returned by early April allowing them to be included in the new Mineral Resource and Ore Reserve update released today.

As previously announced on 10 April and 7 June 2024, the results of the Sorowar – Pigiput Trend resource definition holes, together with an additional four prioritised exploration drill holes, have further defined a new zone of broad mineralisation. The mineralisation has a 400 metre northwest strike between the existing Sorowar and Pigiput ore bodies and extends up to 100 metres down dip from the current Inferred Resource area.

Assay results for all eight Pigibo resource definition holes were received in June (see announcement of 25 June 2024 titled "*Simberi Diamond Drill Program Update; Gold Results Returned from Pigibo Resource Definition Drilling*"). The holes will assist in improving confidence in the resource through locally upgrading the resource classification.

Selected significant assays previously reported from the Sorowar – Pigiput diamond program in FY24 included:

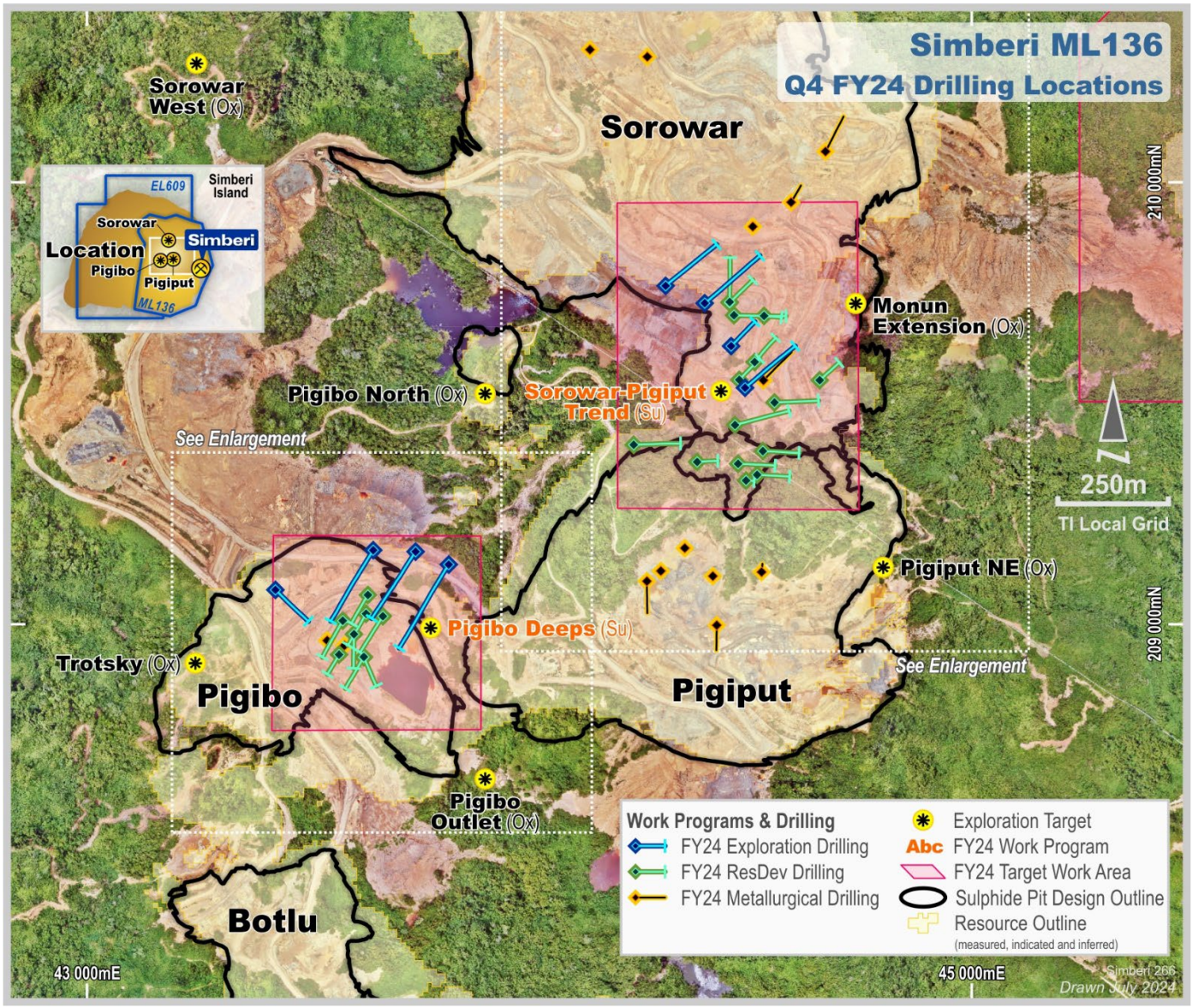
- SDH524: 43 m @ 1.8 g/t Au from 95 m, including 23 m @ 2.6 g/t Au from 98 m;
- SDH525: 24 m @ 1.3 g/t Au from 105 m, 22 m @ 1.6 g/t Au from 147 m, 21 m @ 4.0 g/t Au from 176 m;
- SDH530: 50 m @ 1.7 g/t Au from 76 m, including 29 m @ 2.4 g/t Au from 77 m;
- SDH531: 56 m @ 2.9 g/t Au from 103 m, including 28 m @ 4.7 g/t Au from 103 m;
- SDH533: 45 m @ 2.2 g/t Au from 0 m, including 10 m @ 5.1 g/t Au from 26 m;
- SDH534: 14 m @ 2.2 g/t Au from 122 m, 16 m @ 2.0 g/t Au from 184 m;
- SDH537: 24 m @ 2.1 g/t Au from 90 m, including 3 m @ 12.2 g/t Au from 102 m; and,
- SDH542: 44 m @ 2.5 g/t Au from 113 m, including 9 m @ 6.7 g/t Au from 119 m.

Selected significant assays previously reported from the Pigibo diamond program in FY24 included:

- SDH550: 40 m @ 3.1 g/t Au from 21 m, including 24 m @ 4.4 g/t Au from 37 m;
- SDH539: 71 m @ 1.2 g/t Au from 0 m;
- SDH535: 56 m @ 1.2 g/t Au from 0 m, including 8 m @ 3.2 g/t Au from 48 m;
- SDH536: 36 m @ 1.7 g/t Au from 97 m, including 6 m @ 5.6 g/t Au from 113 m; and,
- SDH532: 21 m @ 2.7 g/t Au from 54 m, including 10 m @ 4.6 g/t Au from 63 m.

Based on the results of the FY24 Simberi sulphide drilling program, the Company has accelerated the approval of the 9,000 m FY25 sulphide drilling program[5].

Figure 1. FY24 Completed Diamond Drilling, Simberi Island, Papua New Guinea



5 Refer to ASX announcement on 1 July 2024 titled "*Target Lifted by 50% to 1.5 Moz for Simberi Upgrade from Inferred to Indicated Mineral Resource; FY25 Resource Definition and Exploration Drilling Program Approved*"

Figure 2. FY24 Completed Diamond Drilling, Sorowar – Pigiput Trend, Simberi Island

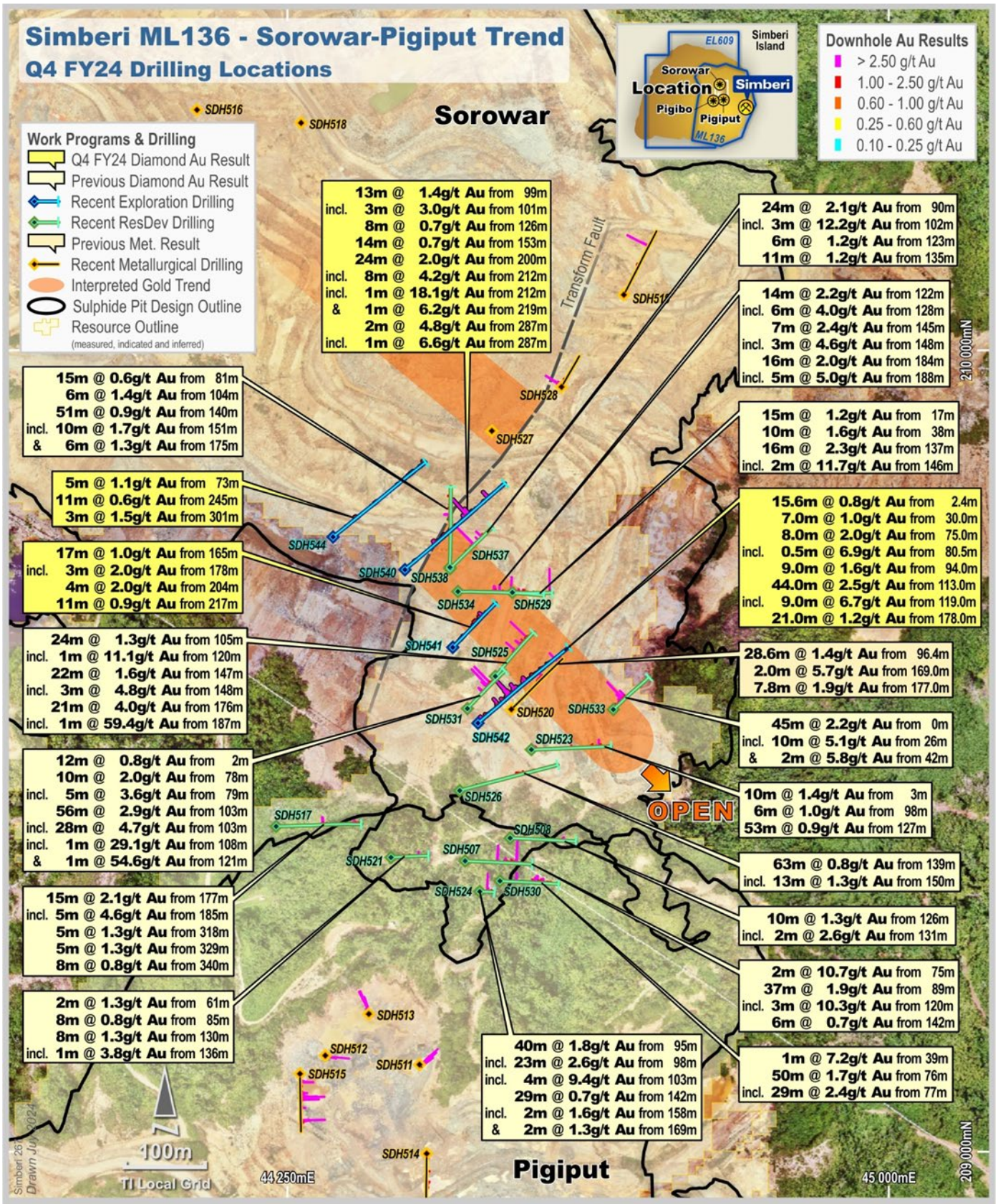
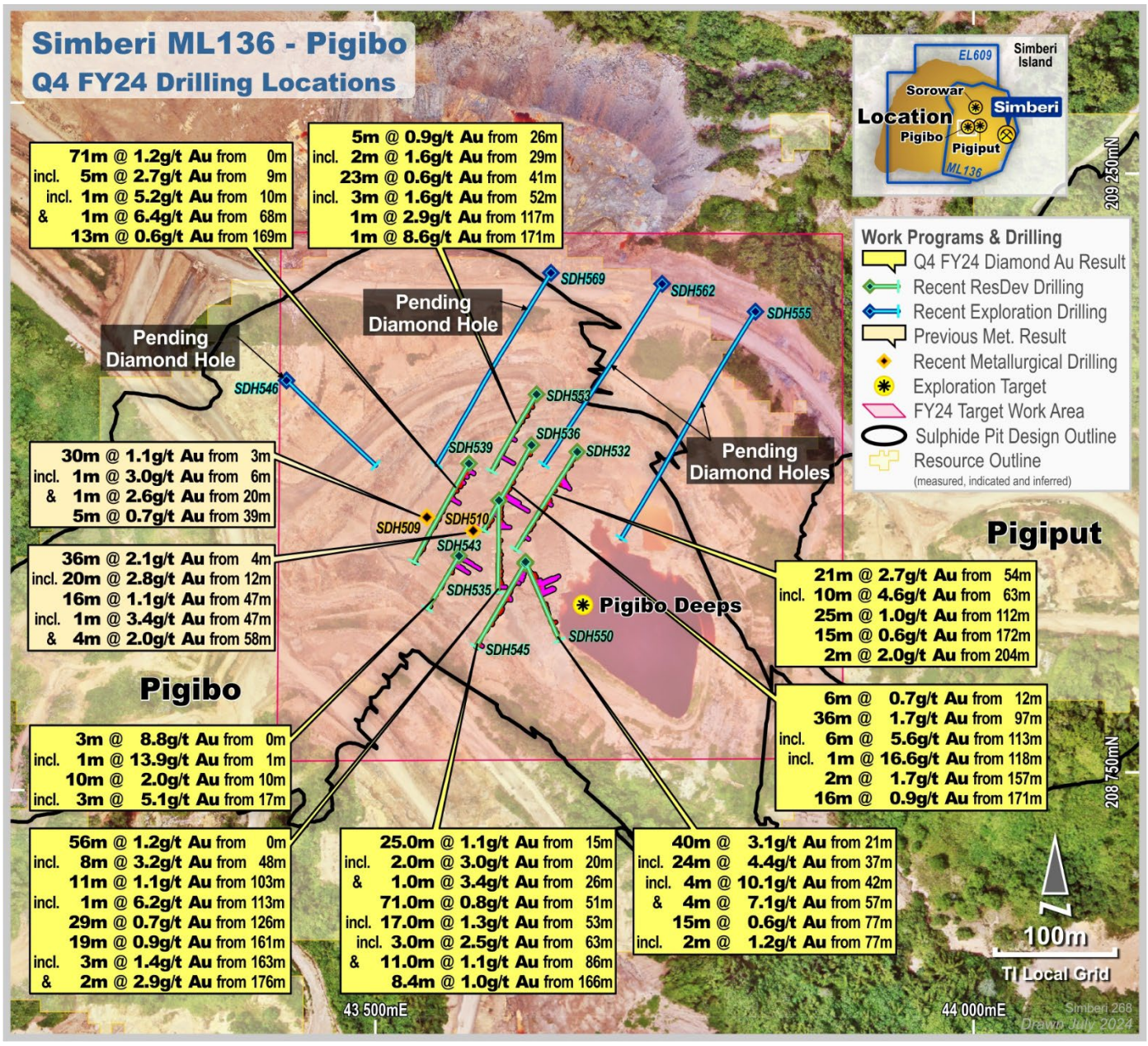


Figure 3. FY24 Completed Diamond Drilling, Pigibo, Simberi Island



Atlantic

Given the opportunity at Simberi and the continuing difficulties encountered by its subsidiary Atlantic Mining Nova Scotia (AMNS) with the Nova Scotia Department of Environment and Climate Change (NSECC), the Company decided not to ramp up preparation for revised environmental approval submissions for the 15-Mile Project at this time, instead prioritising the advancement of the Simberi project. However, during Q4, community consultations continued in Nova Scotia, and environmental baselines and documentation of work to date was undertaken.

Safety and sustainability

There were three reportable injuries at Simberi but zero reportable injuries for reclamation works in Atlantic or at Exploration sites. The Exploration team had another full twelve months free of reportable injuries.

The 12-month moving average Total Recordable Injury Frequency Rate rose from 3.4 for Q3 to 4.1 at the end of Q4. This is in part due to the higher reportable injuries at Touquoy in Q1 becoming more significant against the lower worker exposure hours but also due to higher recordable injury events at Simberi. Simberi undertook a safety intervention plan in April to refocus attention on safety behaviour and mandatory revisions on the use of job hazard analysis and escalation processes and in-field leadership observations increased.

Work commenced on the most significant work package so far in the reclamation of Touquoy mine site in Nova Scotia. Civil works commenced on the construction of the spillway for the tailings management facility (TMF). The opportunity is also being taken to re-slope the southern wall of the TMF while undertaking the spillway construction. The good weather in Nova Scotia has allowed early progress on reclamation of various available areas around the facilities.

Touquoy gold mine will be the first metalliferous mine in Nova Scotia to ever move into full reclamation. St Barbara's subsidiary AMNS has been conscious that, as this is the first time the Province has regulated a metalliferous mine closure and reclamation process, it would require a collaborative engagement with the regulators. AMNS has proposed a science driven site specific risk-based approach to reclamation, consistent with the most progressive regulatory standards and supported by third party expert studies. Conditions imposed by NSECC have in many instances differed from what AMNS has proposed. AMNS is currently reviewing the regulators' most recent response and considering options to achieve a safe and science based reclamation plan for the Touquoy gold mine.

During Q4, independent renewable energy company, Natural Forces, continued its investigation into the potential repurposing of the existing Touquoy open pit, waste rock storage area and the TMF into assets for a renewable energy project for the Province of Nova Scotia. The Nova Scotia 2030 Clean Power Plan is substantially built around wind power generation to add to significant hydroelectric generation capacity, but does require the installation of more than 300 MW of solar generation capacity and more than 300 MW of battery storage to improve grid resilience and reliability.

The Touquoy mine is already connected to the existing transmission network. Pumped hydro energy is a proven technology that allows excess renewable energy to be stored energy over long durations and efficiently dispatched in response to respond to grid fluctuations.

A conceptual design is expected by the end of the Q2 FY25.

Operations

Simberi Operations, New Ireland Province, Papua New Guinea

Production Summary		Q4 Jun FY23	Q1 Sep FY24	Q2 Dec FY24	Q3 Mar FY24	Q4 Jun FY24	Year FY23	Year FY24
Ore Mined	kt	479	592	632	665	710	2,607	2,599
Waste mined	kt	1,858	1,697	1,467	1,062	1,337	7,372	5,564
Mined grade	g/t	1.10	0.88	1.12	1.29	1.00	1.07	1.07
Ore milled	kt	500	464	451	428	515	2,422	1,858
Milled grade	g/t	1.81	0.96	1.18	1.63	1.17	1.23	1.22
Recovery	%	86	73	75	77	73	81	75
Gold production	**oz**	**25,189**	**10,379**	**12,969**	**17,257**	**14,100**	**78,320**	**54,705**
Gold sold	oz	17,895	15,579	13,644	18,016	14,818	75,183	62,058
Realised gold price	$/oz	2,941	2,920	3,020	3,178	3,525	2,724	3,161
All-In Sustaining Cost (AISC)	$/oz produced	**2,208**	**4,548**	**3,889**	**3,074**	**3,590**	**2,419**	**3,694**

The strategy at Simberi for FY24 has been to extend the viable operating life with oxide ores that can be treated through the existing Cyanide in Leach circuit. Sustaining operations at break-even or near break-even operating cashflow is a superior outcome to any temporary closure with care and maintenance costs and workforce and community disruption to a well-established business.

With the successful extension of viable oxide mine life to beyond FY28, if necessary, the Company views the investment in repairs, refurbishments and targeted growth capital continues to be a sound investment. This is particularly important given much of the existing processing plant is to be retained for use in the expanded sulphides operations from mid-FY28.

Simberi gold production for Q4 was 14,100 ounces at AISC of A$3,590 per ounce produced. AISC has been adjusted for abnormal aviation costs as a result of the temporary PNG fuel crisis. Gold sold from Simberi for Q4 was 14,818 ounces at a realised gold price of A$3,525 per ounce.

As previously announced[6] the inability to achieve the targeted face position in the Sorowar open pit, due to poor excavator availability during Q3 in particular, meant that planned higher grade Sorowar ore zones were not able to be mined. This necessitated the adjustment to previous guidance.

To mitigate the potential recurrence of these excavator availability issues, an additional excavator has been acquired and is expected to arrive at Simberi in early Q3 FY25. The two larger capacity Volvo A60H articulated trucks for performance trialling arrived at the end of Q4. Despite some continued impact from excavator fleet availability, total material movement for Q4 improved on Q3, with ore mined during the quarter the highest in FY24 as the mining fleet benefited from additional trucks and the implementation of an improved fleet management system.

Ore milled in Q4 was 20% higher than in Q3, with ball mill throughput at its highest for FY24.

FY25 Guidance

FY25 guidance at Simberi is for gold production of between 65,000 and 75,000 ounces at an AISC of between A$3,200 and A$3,600 per ounce.

As previously announced the FY25 diamond drilling exploration expenditure at Simberi is forecast at A$7 million, with a further A$1 to A$2 million on the neighbouring islands of Tatau and Big Tabar.

Operation	Gold production (koz)	AISC (A$/oz)	Sustaining capital (A$M)	Growth capital (A$M)
Simberi Operations	65 – 75	3,200 – 3,600[7]	10 – 15	30 – 40

6 Refer to ASX announcement on 27 May 2024 titled *"Simberi Q4 Oxide Operations Update and FY24 Guidance Change"*

7 US$2,100 to US$2,400 per ounce at AUD/USD of 0.66.

Exploration activities

Group Exploration expenditure (unaudited)

Exploration expenditure for FY24 was A$5.4 million, falling within the guidance range of A$5 to A$6 million.

Group Exploration	Actual Q1 Sep FY24 A$M	Actual Q2 Dec FY24 A$M	Actual Q3 Mar FY24 A$M	Actual Q4 Jun FY24 A$M	Actual Year FY24 A$M	Guidance FY24 A$M
Australia	0.3	0.1	1.1	-	1.5	1
Tabar Island Group, Papua New Guinea	-	-	0.1	1.3	1.4	1
Nova Scotia Regional	0.1	0.2	0.5	1.7	2.5	4 – 5
Consolidated	**0.4**	**0.3**	**1.7**	3.0	5.4	**5 – 6**

Papua New Guinea

Simberi, Tatau & Tabar Islands

The focus of Simberi's exploration for FY24 was on the resource definition drilling program targeting the conversion of Inferred Mineral Resource to Indicated Mineral Resource. The ASX announcements on 10 April 2024[8], 7 June 2024[9] and 25 June 2024[10] outline the available drill results which supported the work.

Exploration on EL609 and EL2462 on Tatau Island also continued during Q4. A total of 29 hand auger soil samples were collected from EL2462 on a 200 m by 200 m to 100 m by 100 m spaced grid. Six trenches for 294 m and 174 samples were collected from EL2462.

EL609 and EL2462 were renewed on 1 July 2024 and 2 July 2024 respectively on the back of an aggressive work program proposed for FY25 and FY26.

Canada

Cochrane Hill

A diamond drill program comprising 20 holes for 3,853 m was completed at Cochrane Hill, Nova Scotia between January and March 2024. The program included a three-hole, 1,422 m program at Cochrane Hill Deeps and a 17 hole, 2,431 m program at Cochrane Hill East and West. Assay results for the 20 Cochrane Hill diamond drill holes were received in June (see announcement 17 June 2024 titled "*Cochrane Hill Diamond Drill Program Update - Gold Results Returned from Diamond Drill Program*").

These results confirmed the existing open pit design limits and allows refreshed design of infrastructure and layout in light of clarification areas available after sterilisation drilling along strike to east and west of the current design.

Southwest Regional

An Interface Reverse Circulation (IFRC) drill program consisting of 54 holes for 1,012 m was completed at Pleasantfield East and Pleasantfield S1. The IFRC program tested a gold-in-till anomaly associated with a prospective anticline. Assay results are expected in August 2024.

Australia

Back Creek, New South Wales

A 28-hole (BKAC0080 to BKAC0107) aircore drill program of 2,861 m was completed during the March quarter that tested for orogenic gold style mineralisation along a further 1.1 kilometre strike length of the Southwest Target. Gold assay results were received for all 4-metre composite and 1-metre bottom of hole samples and reported in the March quarter.

8 Refer to ASX announcement titled *"New Sorowar – Pigiput Mineralised Zone Confirmed"*

9 Refer to ASX announcement titled *"More Encouraging Assay Results from Sorowar – Pigiput Mineralised Zone"*

10 Refer to ASX announcement titled *"Simberi Diamond Drill Program Update"*

Gold assay results for 4-metre composites returning greater than 50 ppb Au were subsequently resampled at individual 1-metre intervals and analysed for gold. The best one metre re-split results include:

BKAC0096: 3 m @ 1.3 g/t Au from 72 m including 1 m @ 2.6 g/t Au from 72 m;

BKAC0098: 4 m @ 2.0 g/t Au from 75 m including 1 m @ 7.4 g/t Au from 75 m;

BKAC0103: 4 m @ 2.7 g/t Au from 62 m including 1 m @ 10.1 g/t Au from 62 m; and

BKAC0106: 4 m @ 1.9 g/t Au from 78 m including 1 m @ 4.4 g/t Au from 80 m.

The aircore drill program successfully tested and extended the currently identified +0.1 g/t Au gold in bedrock geochemical anomaly from 1 km to 2.1 km strike length and remains open along strike to the north and south. Gold mineralisation intersected in aircore drilling appears to be improving towards the south.

A two-hole (BKDD0006 and BKDD0007) diamond drill program for 799.2 m was completed during the March quarter testing two magnetic highs at the Northeast Target for both porphyry Cu-Au and epithermal Au style mineralisation. Despite BKDD0006 intersecting broad zones of 5-10% disseminated and vein pyrite in strongly altered volcaniclastics in the top half of the hole, only limited 1 m intercepts assaying below 500 ppb Au were returned.

Pinjin Project, Western Australia

No field activity occurred during the quarter.

Figure 4. Q4 FY24 Completed Interface RC Drilling at Pleasantfield, Nova Scotia, Canada

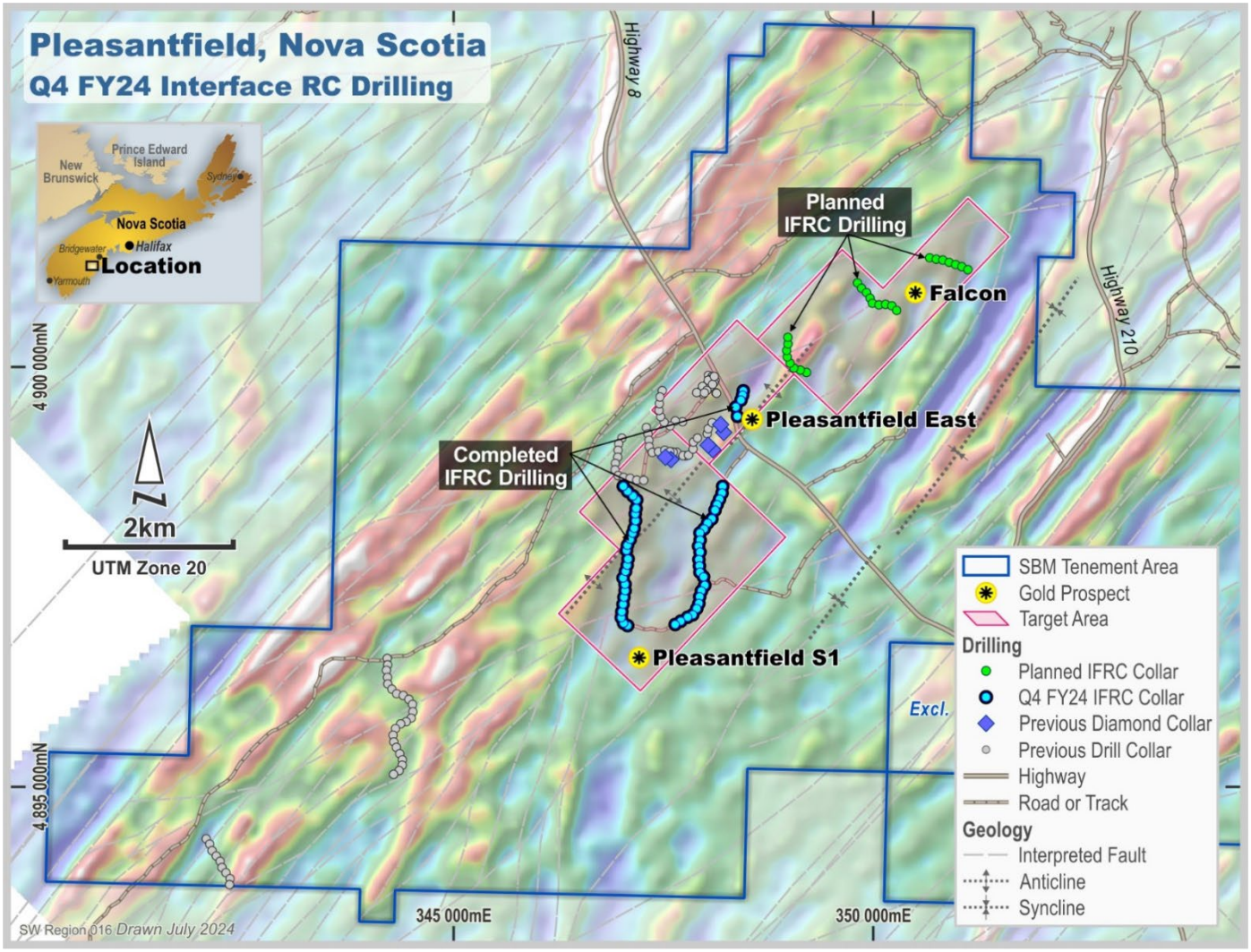


Figure 5. Q4 FY24 Completed Aircore Drilling at Southwest Target, Back Creek, NSW

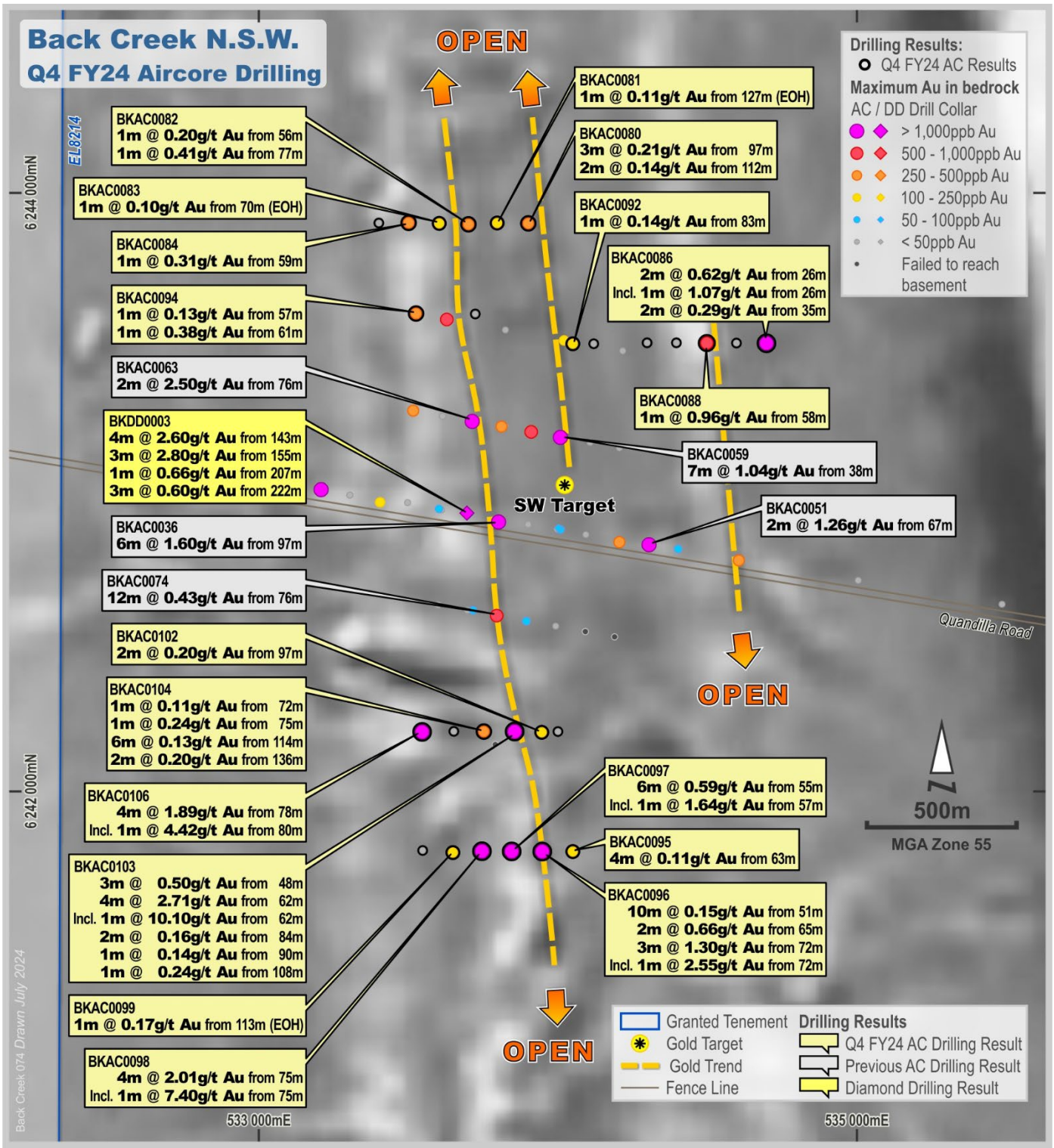


Table 2: Back Creek Aircore Significant Intercepts – West Wyalong, New South Wales

Hole Id	North	East	RL	Dip/ Azimuth	Total Depth	Down-hole Mineralised Intersection			
	m	m	m	degrees	m	From	To	Interval	Gold grade
						m	m	m	ppb Au
2024BKAC0080	6,243,898.8	533,901.9	230.0	-70 / 090	125.0	97.0	100.0	3.0	213
						112.0	114.0	2.0	145
2024BKAC0081	6,243,899.3	533,797.8	230.0	-70 / 090	128.0	127.0	128.0	1.0	105
2024BKAC0082	6,243,895.6	533,701.3	230.0	-70 / 090	127.0	56.0	57.0	1.0	203
						77.0	78.0	1.0	411
2024BKAC0083	6,243,898.0	533,603.9	230.0	-70 / 090	71.0	70.0	71.0	1.0	101
2024BKAC0084	6,243,900.3	533,501.8	230.0	-70 / 090	96.0	59.0	60.0	1.0	311
2024BKAC0085	6,243,899.2	533,401.6	230.0	-70 / 090	117.0	No Significant Results			
2024BKAC0086	6,243,497.9	534,697.5	230.0	-70 / 090	46.0	26.0	28.0	2.0	617
including						26.0	27.0	1.0	1,065
						35.0	37.0	2.0	292
2024BKAC0087	6,243,498.4	534,597.4	230.0	-70 / 090	63.0	No Significant Results			
2024BKAC0088	6,243,498.9	534,498.6	230.0	-70 / 090	92.0	58.0	59.0	1.0	955
2024BKAC0089	6,243,499.4	534,396.2	230.0	-70 / 090	93.0	No Significant Results			
2024BKAC0090	6,243,499.6	534,298.9	230.0	-70 / 090	109.0	No Significant Results			
2024BKAC0091	6,243,496.7	534,120.8	230.0	-70 / 090	113.0	No Significant Results			
2024BKAC0092	6,243,496.6	534,050.2	230.0	-70 / 090	101.0	83.0	84.0	1.0	143
2024BKAC0093	6,243,595.5	533,724.2	230.0	-70 / 090	81.0	No Significant Results			
2024BKAC0094	6,243,597.2	533,526.1	230.0	-70 / 090	105.0	57.0	58.0	1.0	126
						61.0	62.0	1.0	378
2024BKAC0095	6,241,799.4	534,050.8	230.0	-70 / 090	124.0	63.0	67.0	4.0	111
2024BKAC0096	6,241,799.1	533,948.6	230.0	-70 / 090	107.0	51.0	61.0	10.0	150
						65.0	67.0	2.0	662
						72.0	75.0	3.0	1,298
including						72.0	73.0	1.0	2,550
2024BKAC0097	6,241,800.1	533,846.6	230.0	-70 / 090	103.0	55.0	61.0	6.0	587
including						57.0	58.0	1.0	1,635
2024BKAC0098	6,241,799.9	533,746.9	230.0	-70 / 090	96.0	75.0	79.0	4.0	2,008
including						75.0	76.0	1.0	7,400
2024BKAC0099	6,241,795.9	533,649.1	230.0	-70 / 090	114.0	113.0	114.0	1.0	168
2024BKAC0100	6,241,802.8	533,548.6	230.0	-70 / 090	87.0	No Significant Results			
2024BKAC0101	6,242,199.2	534,000.6	230.0	-90 / 090	110.5	No Significant Results			
2024BKAC0102	6,242,197.6	533,946.8	230.0	-90 / 090	108.0	97.0	99.0	2.0	195

Table 2 Continued: Back Creek Aircore Significant Intercepts – West Wyalong, New South Wales

Hole Id	North	East	RL	Dip/ Azimuth	Total Depth	Down-hole Mineralised Intersection			
	m	m	m	degrees	m	From	To	Interval	Gold grade
						m	m	m	ppb Au
2024BKAC0103	6,242,199.7	533,855.2	230.0	-90 / 090	111.0	48.0	51.0	3.0	504
						62.0	66.0	4.0	2,714
including						62.0	63.0	1.0	10,100
						84.0	86.0	2.0	164
						90.0	91.0	1.0	138
						108.0	109.0	1.0	243
2024BKAC0104	6,242,200.0	533,752.1	230.0	-90 / 090	143.0	72.0	73.0	1.0	107
						75.0	76.0	1.0	243
						114.0	120.0	6.0	126
						136.0	138.0	2.0	200
2024BKAC0105	6,242,200.2	533,652.3	230.0	-90 / 090	117.0	No Significant Results			
2024BKAC0106	6,242,198.9	533,546.7	230.0	-90 / 090	96.5	78.0	82.0	4.0	1,886
including						80.0	81.0	1.0	4,420
2024BKAC0107	6,241,796.9	533,758.7	230.0	-90 / 090	77.0	No Significant Results			

Table 3: Back Creek Diamond Drilling Significant Intercepts – West Wyalong, New South Wales

Hole Id	North	East	RL	Dip/ Azimuth	Total Depth	Down-hole Mineralised Intersection			
	m	m	m	degrees	m	From	To	Interval	Gold grade
						m	m	m	ppb Au
2024BKDD0006	6,249,536.9	539,458.3	220.2	-75 / 270	402.7	376.0	377.0	1.0	146
2024BKDD0007	6,248,667.0	539,882.0	226.0	-66 / 036	396.5	143.0	144.0	1.0	370
						230.0	231.0	1.0	117
						301.0	302.0	1.0	127

Finance (unaudited)

St Barbara sold 15,565 ounces of gold in Q4 at an average realised gold price of A$3,525 per ounce. Gold sold included 746 ounces recovered from off-site treatment of carbon fines and sludges recovered during decommissioning of the Touquoy plant.

Total cash at bank at 30 June 2024 was A$191 million (including restricted cash of A$45 million for the Touquoy reclamation bond), after growth capital costs of A$11 million, Simberi operating loss of A$7 million and Atlantic care and maintenance costs of A$3 million during Q4.

Cash movements & balance A$M (unaudited)	Q4 Jun FY23	Q1 Sep FY24	Q2 Dec FY24	Q3 Mar FY24	Q4 Jun FY24	Year FY24
Growth Projects						
Atlantic	(3)	(2)	(3)	(2)	(3)	(10)
Simberi	-	(1)	(2)	(3)	(8)	(14)
Atlantic Care & Maintenance	-	-	(4)	(4)	(3)	(11)
Atlantic Rehabilitation	-	-	(2)	(1)	(3)	(6)
Exploration	(3)	-	-	(2)	(3)	(5)
Simberi Operation	3	-	(10)	4	(7)	(13)
Atlantic Operation	16	6	-	-	2	8
Corporate Costs	(6)	(5)	(4)	(2)	(3)	(14)
Project costs	(5)	-	-	-	-	-
Corporate Royalties	(2)	(2)	-	-	-	(2)
Income Tax payments	(12)	2	-	12	-	14
Working Capital movement	11	(4)	-	1	1	(2)
Cashflows before financing costs	**(1)**	**(6)**	**(25)**	**3**	**(27)**	**(55)**
Net Interest income/(expense)	(1)	-	2	2	1	5
Lease facility	(7)	(1)	(2)	(1)	(1)	(5)
Other Financing and Assets sales	(159)	-	3	-	-	3
Discontinued Operations - Leonora						
Operating Cashflow	32	(24)	-	-	-	(24)
Working Capital finalisation	-	(32)	-	-	-	(32)
Growth Capital	(1)	-	-	-	-	-
Proceeds from Leonora Asset Sale	371	5	-	-	-	5
Net Movement for Period	**234**	**(58)**	**(22)**	**4**	**(27)**	**(103)**
Cash Balance at start of quarter	**60**	**294**	**236**	**214**	**218**	**294**
Total Cash at end of quarter	**294**	**236**	**214**	**218**	**191**	**191**
Cash available for use	*247*	*189*	*167*	*171*	*146*	*146*
Restricted cash	47	47	47	47	45	45

Group Sustaining Capex	Actual Q1 Sep FY24 A$M	Actual Q2 Dec FY24 A$M	Actual Q3 Mar FY24 A$M	Actual Q4 Jun FY24 A$M	Actual FY24 A$M	Guidance FY24 A$M
Atlantic	-	-	-	-	-	-
Simberi	1	4	3	-	8	13 – 15

Group Growth Capex	Actual Q1 Sep FY24 A$M	Actual Q2 Dec FY24 A$M	Actual Q3 Mar FY24 A$M	Actual Q4 Jun FY24 A$M	Actual FY24 A$M	Guidance FY24 A$M
Atlantic	2	3	2	3	10	13 – 15
Simberi	1	2	3	8	14	10 – 13

Equity Investments

The listed investment portfolio increased in value to A$49 million at end of Q4 (up from A$27 million at end of Q3), with inclusion of the Brightstar Resources Limited (ASX:BTR) (Brightstar) shares and an increase in the share price of Catalyst Metals.

Subsequent to the quarter end Brightstar issued the remaining 110 million shares (related to conversion of Linden debt) to the Company, increasing the shareholding to 12.1% or 572.3 million shares.

At the date of this report, St Barbara holds the following listed investments:

Company	Shares (M)	Ownership (%)	Value (A$M)*
Brightstar Resources (ASX: BTR)	572.3	12.1	8.6
Catalyst Metals (ASX: CYL)	12.7	5.7	25.3
Kin Mining (ASX: KIN)	158.1	13.4	9.3
Peel Mining (ASX: PEX)	41.5	7.2	5.6
Total	-	-	**48.8**

*Based on closing shares price on 29 July 2024

Corporate

As announced on 26 June 2024, Ms Stef Loader resigned as a Non-Executive Director of the Company, effective 30 June 2024. The Board determined that, following the appointment of three new Directors in September 2023, its composition skills, experience and size is appropriate and will not be seeking to appoint a replacement Director.

Authorised by

Andrew Strelein

Managing Director & CEO
30 July 2024

For more information

Investor Relations

David Cotterell
General Manager Business Development & Investor Relations

info@stbarbara.com.au

T: +61 3 8660 1959
M: +61 447 644 648

Media Relations

Paul Ryan / Michael Weir
Sodali & Co
M: +61 409 296 511 / +61 402 347 032

Share capital

Issued shares	ASX:SBM
Opening Balance 31 March 2024	817,970,380
Issued	Nil
Closing balance 30 June 2024	**817,970,380**

Unlisted employee rights	ASX:SBMAK
Opening balance 31 March 2024	53,701,907
Issued	Nil
Exercised as shares	Nil
Lapsed[11]	(85,886)
Closing balance 30 June 2024	**53,701,907**
Comprises rights expiring:	
30 June 2024	2,599,990
30 June 2025	4,050,893
30 June 2026	47,051,024
Unlisted rights issued under the NED Equity Plan	Nil
Closing balance 30 June 2024	**53,701,907**

11 Rights lapsed due to conditions not being met.

Corporate directory

St Barbara Limited ABN 36 009 165 066

Board of Directors

Kerry Gleeson, *Non-Executive Chair*

Andrew Strelein, *Managing Director & CEO*

Joanne Palmer, *Non-Executive Director*

Mark Hine, *Non-Executive Director*

Warren Hallam, *Non-Executive Director*

Company Secretary

Kylie Panckhurst, *General Counsel & Company Secretary*

Executives

Andrew Strelein, *Managing Director & CEO*

Sara Prendergast, *Chief Financial Officer*

Randy McMahon, *EGM Simberi*

Brett Ascott, *EGM Projects & Technical Support*

Roger Mustard, *EGM Exploration*

Registered Office

Level 19, 58 Mounts Bay Road

Perth Western Australia 6000 Australia

T +61 8 9476 5555

F +61 8 9476 5500

E info@stbarbara.com.au

stbarbara.com.au

Australian Securities Exchange (ASX) Listing code "SBM"

Financial figures are in Australian dollars (unless otherwise noted)

Financial year commences 1 July and ends 30 June

Q1 Sep FY24 = quarter to 30 Sep 2023

Q2 Dec FY24 = quarter to 31 Dec 2023

Q3 Mar FY24 = quarter to 31 Mar 2024

Q4 Jun FY24 = quarter to 30 Jun 2024

Shareholder Enquiries

Computershare Investor Services Pty Ltd

GPO Box 2975

Melbourne Victoria 3001 Australia

T 1300 653 935 (within Australia)

T +61 3 9415 4356 (international)

F +61 3 9473 2500

www.investorcentre.com/au

Investor Relations

David Cotterell, *General Manager Business Development and Investor Relations*

T +61 3 8660 1959

M +61 447 644 648

Substantial Shareholders

% of Holdings[12]	
Baker Steel Capital Managers LLP	9.2%
Schroder Investment Management Australia Limited	5.4%

12 As notified by the substantial shareholder up to 29 July 2024.

Production and All-In Sustaining Cost

Production summary		Simberi Operations				
		Q1 Sep FY24	Q2 Dec FY24	Q3 Mar FY24	Q4 Jun FY24	FY24
Ore Mined	kt	592	632	665	710	2,599
Waste mined / in-pit handling	kt	1,697	1,467	1,062	1,337	5,564
Mined grade	g/t	0.88	1.12	1.29	1.00	1.07
Ore milled	kt	464	451	428	515	1,858
Milled grade	g/t	0.96	1.18	1.63	1.17	1.22
Recovery	%	73	75	77	73	74
Gold production	**oz**	**10,379**	**12,969**	**17,257**	**14,100**	**54,705**
Gold sold	oz	15,579	13,644	18,016	14,818	62,057
Realised gold price	A$/oz	2,937	3,016	3,178	3,525	3,161
All-In Sustaining Cost[13] *A$/oz produced*						
Mining		1,918	1,678	1,391	1,500	1,587
Processing		1,455	1,253	885	1,224	1,168
Site Services		796	723	556	831	712
Stripping and ore inventory adj		-	(154)	(61)	(285)	(129)
		4,169	**3,500**	**2,771**	**3,270**	**3,338**
By-product credits		(14)	(9)	(17)	(34)	(19)
Third party refining & transport		20	18	9	45	22
Royalties		108	79	83	93	89
Total cash operating costs		**4,283**	**3,588**	**2,846**	**3,374**	**3,430**
Corporate and administration		118	55	39	50	61
Rehabilitation		70	60	44	55	56
Sustaining capital expenditure		77	186	145	111	147
All-In Sustaining Cost (AISC)		**4,548**	**3,889**	**3,074**	**3,590**	**3,694**

13 Non-IFRS measure, refer Appendix

Disclaimer

This report has been prepared by St Barbara Limited ("Company"). The material contained in this report is for information purposes only. This release is not an offer or invitation for subscription or purchase of, or a recommendation in relation to, securities in the Company and neither this release nor anything contained in it shall form the basis of any contract or commitment.

This report contains forward-looking statements that are subject to risk factors associated with exploring for, developing, mining, processing and the sale of gold. Forward-looking statements include those containing such words as anticipate, estimates, forecasts, indicative, should, will, would, expects, plans or similar expressions. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, and which could cause actual results or trends to differ materially from those expressed in this report. Actual results may vary from the information in this report. The Company does not make, and this report should not be relied upon as, any representation or warranty as to the accuracy, or reasonableness, of such statements or assumptions. Investors are cautioned not to place undue reliance on such statements.

This report has been prepared by the Company based on information available to it, including information from third parties, and has not been independently verified. No representation or warranty, express or implied, is made as to the fairness, accuracy or completeness of the information or opinions contained in this report. To the maximum extent permitted by law, neither the Company, their directors, employees or agents, advisers, nor any other person accepts any liability, including, without limitation, any liability arising from fault or negligence on the part of any of them or any other person, for any loss arising from the use of this presentation or its contents or otherwise arising in connection with it.

Non-IFRS measures

The Company supplements its financial information reporting determined under International Financial Reporting Standards (IFRS) with certain non-IFRS financial measures, including Cash Operating Costs and All-In Sustaining Cost. We believe that these measures provide additional meaningful information to assist management, investors and analysts in understanding the financial results and assessing our prospects for future performance.

All-In Sustaining Cost (AISC) is based on Cash Operating Costs and adds items relevant to sustaining production. It includes some, but not all, of the components identified in World Gold Council's Guidance Note on Non-GAAP Metrics - All-In Sustaining Costs and All-In Costs (June 2013).

- AISC is calculated on gold production in the quarter.
- For underground mines, amortisation of operating development is adjusted from "Total Cash Operating Costs" in order to avoid duplication with cash expended on operating development in the period contained within the "Mine & Operating Development" line item.
- Rehabilitation is calculated as the amortisation of the rehabilitation provision on a straight-line basis over the estimated life of mine.

Cash Contribution is cash flow from operations before finance costs, refer reconciliation of cash movement earlier in this quarterly report.

Cash Operating Costs are calculated according to common mining industry practice using The Gold Institute (USA) Production Cost Standard (1999 revision).

Competent Persons Statement

Exploration results

The information in this report that relates to Exploration Results is based on information compiled by Dr Roger Mustard, who is a Member of The Australasian Institute of Mining and Metallurgy. Dr Mustard is a full-time employee of St Barbara and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Mustard consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Mineral Resources and Ore Reserves Estimates

The information in this report that relates to Simberi's Mineral Resources or Ore Reserves is extracted from the report titled '*Simberi Ore Reserves Increase 40% to 2.8 Moz; Mineral Resource and Ore Reserve Statement as at 30 June 2024*' released to the ASX on 30 July 2024 and Atlantic's Mineral Resources or Ore Reserves is extracted from the report titled '*Mineral Resource and Ore Reserve Statement as at 31 December 2023*' released to the ASX on 13 February 2024 (Original Report) available to view at stbarbara.com.au and for which Competent Persons' consents were obtained. Each Competent Person's consent remains in place for subsequent releases by the Company of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the Original Report and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the Original Report continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the Original Report.

Full details are contained in Original Report available at stbarbara.com.au

JORC Table 1 Checklist of Assessment and Reporting Criteria

Section 1 Sampling Techniques and Data – Southwest and Northeast Targets, Back Creek, NSW

Criteria	Commentary
Sampling techniques	• Diamond core samples were comprised of either HQ3 (61.1mm) or NQ2 (50.6mm) sized core. • Diamond core was transferred to core trays for logging and sampling. Half core samples were nominated by the geologist from HQ or NQ diamond core, with a minimum sample width of 20cm and maximum width of 120 cm. • Samples are mostly one metre in length unless a significant geological feature warrants a change from this standard unit. The core was cut (half cored) via an Almonte core saw with the lower or left half (looking downhole) of the core submitted for sample preparation and analysis. • The diamond core samples were submitted to ALS Orange where they were sorted, dried, crushed, split and pulverized to 85% passing -75 µm. • One metre aircore samples were collected from a rig-mounted cyclone via a green plastic bag and were then placed directly on the ground in neat rows of thirty (depending on hole depth). • Drill spoil was sampled with a scoop to 4 m composite samples of approximately 2 kg. The scoop was thoroughly cleaned between each 4m composite sample. • 4 m composites returning significant Au grades > 50 ppb Au were resampled as 1 m splits. • The Aircore composites and 1 m re-splits were submitted to ALS Orange where they were sorted and dried and pulverised to 85% passing -75 µm. • The EOH Aircore samples were submitted to ALS Orange for preparation and were prepared in the same manner as the composites
Drilling techniques	• Rotary mud was used to establish pre-collars for diamond holes and was carried out using a 5 1/8 inch PCD bit. Diamond drilling comprised HQ3 (61.1 mm) and NQ2 (50.6mm) diameter core recovered via using a 3 m or 6 m barrel configuration depending on ground conditions. Drilling was carried out by DDH1 Drilling using an Evolution FH3000 multi-purpose truck-mounted rig. • Aircore drilling was carried out by an 85mm bit. All holes were drilled to refusal which was generally at the fresh rock interface. Drilling was carried out by Broken Hill Exploration Drilling, who utilised a truck mounted UDR650 with Auxiliary Compressor Silenced Sullair 350 PSI x 1150 CFM.
Drill sample recovery	• Aircore sample recoveries were routinely recorded for holes BKAC0080 to BKAC0089. • The aircore drill cyclone and sample buckets were cleaned regularly, in particular after wet ground was encountered. The cyclone was also cleaned several times during the course of each hole and after the completion of each hole. • Diamond drilling recovery percentages were measured by comparing actual metres recovered per drill run versus metres recorded on the core blocks.
Logging	• All drill holes were logged in full for lithology, alteration, weathering/regolith and colour. • Aircore and diamond logging was both qualitative and quantitative. • All diamond core was photographed (wet and dry) prior to cutting.
Sub-sampling techniques and sample preparation	• All diamond core was half cored with the lower or left half (looking downhole) submitted for sample preparation and analysis. • Aircore samples were collected as both dry and wet samples using a scoop tool. • Aircore samples were collected at 1 m intervals and composited in 4 m samples using a scoop to collect sample material from individual metre samples. 1 m re-split samples were also collected using a scoop. • All composite samples were sorted, dried and pulverised by ALS Orange to produce a 25g charge prior to digestion. • All diamond core samples were sorted, dried, crushed, split and pulverised by ALS Orange to produce a 30g charge for fire assay and a 25g charge for multi element analysis. • QC procedures for composite sampling involved the insertion of certified reference material and blanks at ratios of 1:50 and the collection of field duplicates at a ratio of 1:50. • ALS inserted certified standards, replicates and lab repeats.
Quality of assay data and laboratory tests	• The Aircore composites were digested with aqua regia with gold analysis by ICP-MS to a detection limit of 1 ppb. The same digested sample also tested for Ag, Al, As, B, Ba, Be, Bi. Ca. Cd. Ce. Co. Cr. Cs. Cu. Fe, Ga, Ge, Hf, Hg, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr by ICPAES (ALS technique AuME-TL43).This was considered appropriate for the analysis of the regolith dominated sample medium. • The EOH Aircore samples and diamond core samples were analysed for Au via 30g Fire Assay with AES-ICP Finish (Au-ICP21 Method). Multi Element analysis was via a four-acid digestion with ICP-MS instrumentation (ME-MS61 method) for 48 elements (Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, Ln, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn & Zr). These methods are considered appropriate for analysis of what was dominantly saprock to fresh rock sample medium. • ALS also analysed the EOH Aircore and diamond samples with a hyperspectral device using technique HYP-PKG. • Certified reference material and blank material was inserted into the sample stream at a ratio of 1:50. • Field duplicates were collected at a ratio of 1:50 for composite aircore samples. • ALS inserted certified standards, replicates, and lab repeats.
Verification of sampling and assaying	• Primary geological and sampling data were recorded into made for purpose excel spreadsheets. Data was then transferred into the St Barbara corporate DataShed database where it was validated by an experienced database specialist. • No adjustments to assay data were made.

Criteria	Commentary
Location of data points	• Prior to drilling, all holes were marked out using a handheld GPS with ±1.8 m accuracy for easting, northings and ±10m elevation. Upon completion of the program all holes were resurveyed using the same handheld GPS to determine the final collar positions. • No downhole surveys were conducted on Aircore drill holes. • A continuous bottom of hole survey was completed on all diamond holes using an Axis Gyro tool. • All locations were captured in MGA94 zone 55 grid.
Data spacing and distribution	• Aircore drill holes were spaced at 100 m centres on each drill line • Drill lines were spaced between 300 m and 1000 m apart.
Orientation of data in relation to geological structure	• Diamond hole BKDD0006 was orientated -70/270, perpendicular to an interpreted north-south oriented dioritic intrusion. • Diamond hole BKDD0007 was orientated -66/036, perpendicular to the broad regional trend. • Aircore drill holes BKAC0080 - 100 were angled at -70/090 but due to ground conditions holes BKAC0101– 107 were drilled vertically. The drill azimuths of inclined holes were largely perpendicular to sedimentary stratigraphy.
Sample security	• Only trained and experienced contractors and company personnel were allowed to collect the samples; all samples were held within a secure location before dispatch to ALS in Orange for registration and preparation of samples prior to forwarding g ALS Perth or ALS Brisbane for analyses.
Audits or reviews	• No audits or reviews of sampling protocols have been completed.

JORC Table 1 Checklist of Assessment and Reporting Criteria

Section 2 Reporting of Exploration Results – Southwest and Northeast Targets, Back Creek, NSW

Criteria	Commentary
Mineral tenement and land tenure status	• SBM has 100% ownership of the two tenements comprising the Back Creek Project. These comprise EL8214 and EL8530.
Exploration done by other parties	• There have been numerous historical holders of the project area which covers over ~128 square kilometres. • Exploration has been conducted by numerous companies including but not limited to: Newcrest Mining Pty Ltd, Brynes FC, Base Mines Ltd, Seltrust Mining Corporation Pty Ltd, Nationwide Resources Pty Ltd, Vanwild Pty Ltd, CRA Exploration Pty Ltd, Gold Mines of Australia Ltd, Astco Resources NL, Golden Hills Mining NL, Resolute Ltd, Teck Cominco Australia Pty Ltd and Goodrich Resources Ltd.
Geology	• SBM was targeting orogenic metasedimentary quartz-sulphide vein hosted gold mineralisation and epithermal and porphyry-style copper-gold mineralisation within Ordovician aged rocks along strike from known occurrences of Macquarie Arc rocks and mineralisation. • The tenement package covers Ordovician aged rocks within the highly prospective Macquarie Arc in the Lachlan Orogen.
Drill hole Information	• Drill hole information for holes returning significant results have been reported in the intercept table. The table includes the following: collar position obtained by GPS pickup, hole dip and azimuth acquired from handheld compass and clinometer, lengths and depths of all composited mineralised intercepts, as well as hole depth.
Data aggregation methods	• No high-grade cut was applied and no metal equivalent values were used for reporting exploration results • Broad down hole intercepts in aircore and diamond holes were reported as length weighted averages using a cut-off of 100 ppb Au. Such intercepts may include material below cut-off but no more than two sequential metres of such material and except where the average drops below the cut-off. Supplementary grades of >1000 ppb Au were used to highlight higher grades zones within the broader zone. • No high-grade cut was applied and no metal equivalent values were used for reporting exploration results.
Relationship between mineralisation widths and intercept lengths	• Down hole length was reported for all holes. • True width was not known as the orientation of mineralisation was not fully understood.
Diagrams	• Diagram for Southwest Target shown in this report.
Balanced reporting	• Details of all holes material to Exploration Results have been reported in the intercept tables.
Other substantive exploration data	• Included in the body of the report.
Further work	• Further exploration Aircore or Diamond drilling has not yet been planned.